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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/599,694 | 01/19/2007 | Adam John Walker | 112783 | 2909 |
| 27148 7590 03/24/2009 POL SINELLI SHUGHART PC 700 W. 47TH STREET SUITE 1000 KANSAS CITY, MO 64112-1802 | | | EXAMINER MC GINTY, DOUGLAS J | |
| | | | ART UNIT 1796 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/599,694

Applicant(s)

WALKER, ADAM JOHN

Examiner

DOUGLAS MC GINTY

Art Unit

1796

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 32-34, 36-40, 42, 43 and 54-61 is/are pending in the application.
- 4a) Of the above claim(s) 33, 38 and 39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 32, 34, 36, 37, 40, 42, 43 and 54-58 is/are rejected.
- 7) ☒ Claim(s) 59-61 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3-5-09, 3-20-07, and 1-19-07
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of the species **N,N-dimethylethanolammonium formate** in the reply filed on 1-21-09 is acknowledged. The traversal is on the ground(s) that all the species share one or more points of novelty/inventiveness with respect to melting point and water level, and that the claims are novel and inventive over the teachings of Van Ness (US 6,361,940).

The arguments are not found to be persuasive. Many compositions have a mp below 25°C and less than 1% water. The melting point also would have been an inherent characteristic of the salt itself. The applicant urges that Van Ness does not teach isolation or purification of the salts, but the reference still teaches dissolving in water and vacuum drying (col. 91, lines 5-25). The applicant discloses a similar process at p. 31, middle paragraph, of his specification.

It further should be noted that species elections serve to focus prosecution by avoiding multiple prior art and obviousness-type double patenting rejections. See, for example, the teachings of WO 2004/063383 (pp. 10 and 11) and the claims in application no. 12/088,509.

The requirement is still deemed proper and is therefore made FINAL.

Claims 32, 34, 36, 37, 40, 42, 43, and 54-61 are examined herein to the extent they read on the elected species.¹ Claims 33, 38, and 39 are withdrawn from further consideration as directed to non-elected species.

¹ As explained below, however, claims 59-61 are objected to and not considered further.

Claim Objections

Claims 59-61 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim can only depend from multiple claims in the alternative. See MPEP § 608.01(n). Accordingly, claims 59-61 have not been further considered on the merits.

Claim Rejections - 35 USC §§ 102 and 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

The following citations are made for the convenience of the reader.

Notwithstanding those citations, the reference(s) is (are) relied upon for the teachings as a whole.

Claims 32, 34, 36, 37, 40, 42, 43, and 54-56 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over CAS Reg. no. 59101-30-3 (Nov. 16, 1984).

Reg. no. 59101-30-3 teaches the salt dimethylethanolamine formate (N,N-dimethylethanolammonium formate). With respect to the presently claimed melting point and water level, the reference teaches the salt itself. Compositions with the same ingredients would have been expected to have the same properties. MPEP 2112.01, II.

Even though the present claims refer to an "ionic liquid", they only require the presence of dimethylethanolamine formate (N,N-dimethylethanolammonium formate). The term "ionic liquid" in the preamble is considered to be one of intended use only. MPEP 2111.02, II.

Further with respect to claims 55 and 56, Reg. no. 59101-30-3 teaches that the dimethylethanolamine is compounded with the formic acid to form a salt. The act of compounding to form a salt is considered to be equivalent to the steps of providing the amine and neutralizing with an acid.

Based on the foregoing, the claims are found to have been anticipated by the reference. The claims also would have been obvious over the teachings of the reference because the reference is directed to dimethylethanolamine formate (N,N-dimethylethanolammonium formate).

Claims 32, 34, 36, 37, 40, 42, 43, and 54-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rogier (US 2003/0232844).

Rogier teaches salts including, *inter alia*, a base (cation source) such 2-dimethylaminoethanol (dimethylethanolamine) and acid (anion source) such formic acid [0627]. Together, that base and acid form the salt dimethylethanolamine formate (N,N-dimethylethanolammonium formate). Rogier also does not require the presence of water [0623]. With respect to claims 55 and 56, the salt may be made by conventional means such as reacting the base or acid [0627]. With respect to claims 57 and 58, the reference teaches application of an enzyme such as a protease on a substrate [0030]. It is well known that the protease enzyme catalyzes a reaction with protein.

Rogier does not appear to expressly state that the composition is an ionic liquid, exemplify the salt dimethylethanolamine formate (N,N-dimethylethanolammonium formate), or teach a mp of < 25° C and a water content of < 1%.

Still, the present claims would have been obvious in view of the teachings of Rogier because it teaches both the cation and anion from a limited number of choices for use in compositions for applying an enzyme to a substrate. Obviousness only requires a reasonable expectation of success. *In re O'Farrell*, 853 F.2d 894, 904 (Fed. Cir. 1988). See also, MPEP 2143.02. Where the composition would have been obvious, the properties thereof would have been prima facie obvious as well. MPEP 2112.01.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOUGLAS MC GINTY whose telephone number is (571)272-1029. The examiner can normally be reached on M-F, 830-500.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DOUGLAS MC GINTY/
Primary Examiner, Art Unit 1796